GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - nucleic search, using frame_plus_p2n model

January 16, 2003 16:51:22 ; Search time F! 8571 Seconds Run on:

(Without alignments) 137 557 Million cell updates/see

91-020-958-60-SD

1 EPEKE 5 Perfect score: Segitence.

CAMUSOIN Scoring table:

0.5 7 Fqapext. Delext Xgapop 10.0 , Xgapext Xgapop 10 A , Ygapext Fqapop 6 0 Delon 6 0 Delop

2185234 segs, 1174444154 resignes Searched: Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Listing first 45 summaries Postrprevessing: Minimum Match 0% Maximum Match 100%

Command line parameters:

-Moder-frame._p2n.model -DEV-x1p -O=-Cryo12_1/25FU-zpepu-justawashay2vzonat_l4v1zuni_155k44.1511/jfg-qucry.^asta_l1.155z -O=-Cryo12_1/25FU-zpepu-justawashay2vzonat_l4v1zuni_155k44.1511.25z -LOOPEXT=0 -UNITS-bits -STAFT=1 -END=-1 -MATRIX=b1osum62 -TFRNS=bnman40 cdi -LIST=45 -DOOZALIKG=200 -THE_SOOREFTEE FORT -THE_MAX=100 -THE_MINS - Annual - Annual

Database .

/SIDS2/goglata/geneseg/genesege/tunzant/Washna part.*
/SIDS2/goglata/genesege/genesegen/Wash/Washna EAT.*
/SIDS2/goglata/genesegen/genesegen/Febb/ Washna part.* .DAT:* /SLDS2/gegdata/geneseq/geneseqnrembi/NA2002.DAL.* : 'A'. /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1999.DAT:* DAT. DAT: * DAT: * PAT: * * .I.V. /SIDS2/gogdata/jenesed/geneseqn.embi/NA1986.DAT:*/SIDS2/gogdata/geneseq/genesegn.embi/NA1987.DAT:* /SIDSZ/409data/4eneseq/4enesequrembi/NA1988.DAT:* DAT. ٠. 75 LbSZ/gogdata/geneseq/geneseqn-emb1/NA1993. /SIDSZ/gogdata/geneseq/geneseqn-emb1/NA1994. /NA1989. /NA1990 LAN. AN. /SIDS2/qcqdala/qeneseq/qeneseqn-emb1/NA1995 /SIDS2/gcgdata/geneseq/geneseqn-embl/NA1997 NA. /SIDS2/gegdata/geneserg/genesegn-embl/NA1996 /SIDS2/gegdata/geneseg/genesegn-embl/NA1982 /STDS2/gradatu/genesen/geneseqn-embl/NAL983./ /STDs2/gradata/geneseq/geneseqn-empt/NAL984. /STDs2/gradata/geneseq/geneseqn-embl/nAL985. (jangata/garassay/kasaang/atabbag) /SIDS2/qcqdata/geneseq/geneseqn·embl. /SIDS2/qcqdata/geneseq/qeneseqn-embl. 3/grgdata/geneseg/genesejn-embl, /SIDS2/deddata/geneseq/geneseyn amb/

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		æ			SUMMARIES	
Result.	Score	Quer	engtl	⊇B	Ω	Description
	25		21		AA277167	Tanana Malalle
1.54	i da		1 5 4	ou:	AAT90346	Codenacius DUC
33	C1		CI	2.	AAV07133	sedaen
٠ ن	C4		다	Ö	AAX89363	TOSOMA
	un C4		un Cil	CI CI	AAC89617	S. cerevisiae YKRO
	មា ០ រ	di.	C.1	CI CI	AAD21712	ب
	un i c4 :	00.	37	ed i	AAA56790	×
	n u		, r	-4 (AAA56792	×
9 <u>5</u>	 		- 1-	1 6	AAH 34 349	
) 	1 (1	100.0	49	<u> </u>	AA033591	Microsatellite sed
-1	7,1		15	- 1 - 3	AAA?£638	S
æ. □1	25		Ę	덛	AAA76639	n close og253
4	52	ÜÜ.	53	13	AAQ33612	ß
	25		09	24	ABN44740	spliced t
بارد ن	6 ¹ 1 €			2	ААНВЕЭ04	Singre
	25	00	/ 9	7.0	AAH86903	single nucl
	u 1 14 (- c	T :	^4 (*+ (AAH37032	an colon can
6T 0	24 C	00	m : ∞0 :	01 (04 (AAS23537	bican
Q :	n u			11	ABA50927	breast.
- c	1 C	2 c 3 c	100	10	ABASES 200	1176
1 7	1 	9 0	1 % N 3	1 -	AAK17237	Trans.
्रचा १८४) (n	00	3.6	1 (1	AAK43024	bone marrow
u, ci	r.	100	S	C	M124,40	#13723 1c
4.2	ur C.		륹	급	AA149100	#17786 used
27	25		a C	(1) (1)	AA109397	
ф (1)	25	ċ	92	C)	ABS17091	genome
Ž.	υδ (14)			a i	AAC12:04	
Ç, ;	45 i u 5 i i i		707	C1 -	AAL19504	breast
;	- u		101	4 (VVV - 13 - 13 - 14 - 14 - 14 - 14 - 14 - 14	Human Secreted pro
	 		108	1 61	ABK88533	t cholodo
	55		113	C	ABA71165	n foetal
35	C.1	100.0	1.3	C1 C1	AAK19461	Homan brain expres
	C1 (1)		113	(1 (1	AAK45451	غو
	41	100.0	11.5	-1	AA151396	
	C1 (113	77	ABS19716	a denome
98	un C4		115	4	ABA68275	_
₹ .	, . i .		5 .	1	AAKTESS	
	: i			1	AAK4 24 14	DOTE MA
	11 a		1	1	AA123172	= #13105 tor
Y 0	: } -ī	0.001	2) LF - + - - + -	1 0	AA148491 ABS16467	Probe #17177 used
	٠ ٽ			1 -	Absolution	n denome-derr
		:	1	•		CICHE EDIC

ALIGNMENTS

PESULT 1 AA277167

ī AA. 7715. Standard, DNA, DI

AAZ77167;

lo-SEP-2001 (tirst entry)

Hawan bialielie marker dewnstream amplification pringr Sug ID NOAl1523.

Howar genome, Eiallelic marker, high density disequilibrium mappendaric map. Engleyfe, polymorphi. East, genetyping haplityping, haplityping and printing and printing the haplity of the internation of many fixed on, single nucleotide polymorphism, SNE, FCK primer,

diagnosis; ss.

Homo sapiens

```
AA265654 to AA269578 represent homoso bialledic markers from the present invention, which contain a polymorphic base at position 24 of their nucleotide sequences. AA269579 to AA2740 represent amplification primers for the bialledic markers. The bialledic markers of the invention have a variety of uses: they can be used for high density mapping of the human genome, and in complex association studies and haplotyping studies which are useful in determining the genetic basis for disease states. Compositions and methods of the invention can also be useful for the identification of the targets for the development of pharmaceutical agents and diagnostic methods, as well as the edge of characterisation of the differential efficacious responses to and side
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel biallelic markers used to conctruct a high density disequilibrium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            effects from pharmaceutical agents acting on a disease as well as other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N.B. The SEQ ID Nos 2002, 2012, 2074, 3035, 3096, 3157, 3227, 3297 and 3367, are not actually given a sequence in the Sequence Listing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Epithelial protein; heterogeneous nuclear ribonuclear protein; 70.00 antiqen; hinNR-A2; hinNRP-B1; lung cancer; liver cancer; reval cancer; prostate cancer; melanema; head cancer; nuck cancer myclona myclona myclona myclona myclona myclona myclona harker; carcinegenesis; diagnosis; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Meterogeneous nuclear ribonueleoprotein (hnRNP) gene probe.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 21 BP; 13 A; 0 C; 7 G; 1 1; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 9; Page 2687; 2745pp; English.
                                                                                                                                                                                                                                                                                                                                                     Cohen D, Blumenteld M, Chumakov I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US:09 856-070-16 (1-5) x AA277167 (1-21)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAT90346 standard; DNA; 22 BP
                                                                                                                                                                                         98US-0082614.
                                                                                                                              99WO - IB00822
                                                                                                                                                                                                                       98US-0109732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16-JAN-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              map of the human genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 GAGAGAGAAAAAGAG 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                              WPT; 2000-013267/01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hest Local Similarity:
                                                                                                                                                                                                                                                                                      (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
W09954500 A2
                                                                                                                          21-APR-1999;
                                                                                                                                                                                                                    23-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        W09712975-A1.
                                                                                                                                                                                         21-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aliqument Scores:
                                                           28 OCT 1999.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       probe; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAT90446;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA190346
```

```
A new purified protein from epithelial cells—is expressed in high amounts in cancer and precancer cells; used as a marker for diagnosis and treatment of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ribonucleotide protein; hnRNPA2; human epithelial peptide; marker; cancer; probe; hybridisation; primer; amplification; lung; liver; kidney; breast, prostate, meianoma; myeloma; antibody; PCR; ss.
                                                                                                                                                                                                                                                          This antisense oliqonucleotide can be used as a probe in Southern blot analysis of heterogeneous nuclear ribonucleoprotein (hnRNF) sequences. An epitheliai protein (see ANW26546-51) that shows sequence homology to hnRNP AZ/B1 is an early detection marker for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleotide sequence of an antisense oligonucleotide.
                                                                                                                                                                                                                                                                                                                                                                              00000
                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                     Sequence 22 BP; 10 A; 3 C; 7 G; 2 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                            Matches:
                                                                                                                                                                                                                                                                                                                                                                              Length:
                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                        (UYJO ) UNIV JOHNS HOPKINS.
(USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (USSH ) US DEPT HEALTH & HUMAN SERVICES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-856-070-16 (1-5) x AAT90346 (1-22)
                                                                                                                                                                                                                                  Example 1; Page 34; 171pp; English.
                                                                                                                                                                                                                                                                                                                cancer, especially lung cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAV07133 standard; cDNA; 22 BP.
                         96WO-US15825
                                                              95US-0538711
                                                  95US-0725027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-US17714
                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                96US 0725027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SNING ONIN COLYUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-SEP-1998 (first entry)
                                                                                                                              Tockman MS;
                                                                                                                                                                                                                                                                                                                                                                             79.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mulshine JL, Tockman MS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GAGAGAGAAAAGGAA 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GluArqGluLysGlu 5
                                                                                                                                                       WP1; 1997-226219/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 1998-240016/21.
                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
                                                                                                                            Mulshine JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-QCT-1997;
                        02-00T-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-0CT-1996;
                                                              02-0CT-1995;
                                                                                                                                                                                                                                                                                                                                                                 Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9814469-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-APR-1998.
10-APR-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAV07133;
                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAV07133
                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                              Pred.
```

replication and the treatment and prevention of cancer in a human. The obligation collides can be used in vitro to inhibit the growth of cultured mammalian cells e.g. human monkey, meuse, rat and hamster cells which have thromosomial ENA encoding a binding size for 163 profesus. Sequences AAX88356-366 represent oligonucleotides that are based on chromosomal

binding sites for p53 protein.

```
This is the nuclectide sequence of an artisens, edijourdectide used in the method of the invention. Probes and primers that hybridise to or amplify these pertides are used to diagnose prevancerus states, e.g. or lung, liver, kidney, breast, prostate, had or neck, melanoma or mycloma, or to determine susceptibility to these conditions and for monitoring treatment. Precared is also indicated by detecting post-translational modification of the epithelial peptide which is a marker of epithelial cell transformation. Antibodies are potentially
                        New isolated epithelial protein as early marker of cancer ruseful in computer-assisted methods of diagnosis based on discriminant analysis of option, images of cells
                                                                                                                                                                                                                                                                                                                                                                                  useful for diagnosisand treatment of cancer.
                                                                                                                        Disclosure; Page 35; 159; English.
```

Sequence 22 br; 10 A; 3 C; 7 C; 2 1; 0 other;

```
Chromosomal binding site for p53 protein (Seq ID No. 9 of US5936079).
                                                                                                                                                                                                     Cell growth inhibition, chromosomal binding site, p53 protein;
          220000
                          Conservative:
Mismatches:
                 Malches:
        Length:
                                           indels:
                                                                                                                                                                                                                                                                                                                                (ALTO-) ALTON OCHSNER MEDICAL FOUND.
                                                                 US-09-856 070-16 (1 5) x AAV97133 (1-23)
                                                                                                                                                                                                               cellular replication; cancer; ss
                                                                                                                                                                                                                                                                              94HS-0291011.
                                                                                                                                                                                                                                                                                               92US-0879618.
                                                                                                                                                                                                                                                                                                                94US-0291011
                                 100.00%
100 00%
                        100.00%
                                                                                                                                                                    24-SEP-1999 (first entry)
        79 5
25 00
                                                                                                   1 GAGAGAGAAAGGAA 15
                                                                                                                                   AAX89363 standard; DNA;
                                                                                  1 Gluargelulysele 5
                                Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                 Cook J, Re R;
                         Percent Similarity:
                                                                                                                                                                                                                                                                              15-AUG-1994;
                                                                                                                                                                                                                                                                                               01-MAY-1992;
Alignment Scores:
                                                                                                                                                                                                                                                                                                                15-AUG-1994;
                                                                                                                                                                                                                                             US5936079-A
                                                                                                                                                                                                                                                               10-ATG-1999
                                                                                                                                                                                                                                                                                                        06-APR-1992
                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                     AAX89363;
                                          Query Match:
                                                                                                                            AAX89363/c
                                                                                                                    PESULT 4
                  Score.
          Pred
```

```
The present invention provides methods of identifying antifungal agents using the coding and protein sequences of several yeast genes. These are essential for the germination and proliferation of Saccharomyces cerevisiae, and include YKPONIC, YFPONIC, YGRAPON, YGROPAN, YFPONIC, YKR079C and YKPORR. The sequences can also be used to identify compounds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for use as herbicides, insecticides and anti proliferation drugs which can be used in the treatment of cancer, psoriasis and restenosis. This is because they can be used to identily plant, insect and human homologues
                                                                                                                                                                                                                                                                                                                                                                                                      Yeast, germination, proliferation, essential gene, autifundal agent,
insecticide: herbicide, anti-proliferation drug: cancer: psoriasis;
restensis, YKF0810, VFF0830, YGM2770, YGM278W; YKF0710; YKK0790;
YKR0830; PCR primer: ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Identifying antifungal compounds Which target yeast essential genes comprises use of novel Saccharomyces cerevisiae essential genes YFPONGY YGR2727, YGF278M, YKR07017, YKR078Y or YKR08IC
                                                4 v 0 0 0 0
                                                                              Conservative:
Mismatches:
Sequence 22 81, 0 A, 7 C, 0 G, 15 1, 0 other;
                                                                Matches:
                                                 Length:
                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                S. cerevisiae YKR079C gene PCR primer A.
                                                                                                                                                            US-UM-856-070-16 (1 5) x AAXEMBE3 (1 22)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 5; Fig 28; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (ROSE-) ROSETTA INPHARMATICS INC.
                                                                                                                                                                                                                                                                                     AAC89617 standard; DNA; 25 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0315794.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0389341.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12-MAY-2000; 2000WO-US13017
                                                                              100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                   08 MAR-2001 (first catry)
                                              79.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Saccharomyces cerevisiae.
                                                                                                                                                                                        1 GluArgGluLysGlu 5
                                                                                                                                                                                                                      22 GAAAGAGAAAAAGAA 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-025042/03.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of the yeast genes.
                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W0200071161-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-SEP-1999;
                                 Alignment Scores.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roberts CJ;
                                                                                                                                                                                                                                                                                                                     AAC89617;
                                                                                                             Query Match:
                                                 ..
No
                                                                                                                                                                                                                                                                      AAC89617/c
                                                                                                                                                                                                                                                     RESULT 5
                                                                Scores
                                              Pred.
```

Sequence 25 81; 4 A; 8 C; 1 C; 12 T; 0 other;

The invention provides methods for inhibiting cell growth by providing a growing cell with an oligonucleotide capable of binding to a chromosomal binding site for p53 profein. Sequences AAX9945, AAX9945 and AAX9945 represent oligonucleotides that are derived from the sequence AAX99355. The oligonucleotides are used for inhibiting mammalian cellular.

New Oligonucleatide useful for treating and preventing cancer

WPI; 1999-457628/38

Claim 1; Column 12; 12pp; English.

ŝ

```
Imperievi direct repeat #27 of human RFGR exon ORF15 repetitive sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Diagnosing disease or predisposition to disease, associated with disease causing mutations in retinitis pigmentosa GTPase regulator gene by genotyping GRPIS of the gene, and Aetermining presence of mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in identification of potential pharmaceutical targets in high throughput screening assays and forensic analysis. The present sequence is the imperfect direct repeat of human RRSM exon OMFIS repetitive DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to a method for diagnosing disease or predisposition to a disease, associated with a disease causing mutations in a retinitis pigmentosa CHRase regulator (RPGR) year, invelves grootyping a RPGR gene, and determining which the description comprises a disease causing mutations, where the risk yenotype is present within open reading trame (ORF)15 of the RPGR gene. The method is useful for detecting a certain disease state e.g., X-linked retinitis pigmentosa (XLRP). The kit is useful for detecting and measuring disease causing mutations in biological fluids and tissues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and for localising matation in tissues. The mutant RDGR yene is useful
in gene therapy techniques and for sereening agents capable of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       affecting the expression of the sequences and/or the biological activity of mutant RPGR. They are preferably useful for identifying agonists and antagonists of RPGR. The mutant PPGR game is also useful
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; mutation; retinitis pigmentosa C'Frase regulator; RPGR; genotyping; open reading frame, ORF, X linked retinitis pigmentosa; XLRP; qene, therapy; screening; torensic analysis; ds.
                                    2 4 0 0 0 0
                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 27 BP; 13 A; 0 C; 14 G; 0 U; 0 other;
                                                                                                                                       Mismatches:
                                                                 Matches:
                                                                                                                                                                        Indels:
                                    congt h:
                                                                                                                                                                                                                                                                          US-09-856-070 16 (1-5) x AAC89617 (1-25)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Disclosure; Fig 4E; 100pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAD21712 standard; DNA; 27 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-APR-2001; 2001WO-GB01622.
                                                                                               100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-APR 2000; 2000GR-0008R01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MEDI-) MEDICAL RES COUNCIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-JAN 2002 (lirst entry)
                                                                                                                                                                    100.008
                                90.9
25.00
                                                                                                                                                                                                                                                                                                                                                1 GluArqGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                                  19 GAGAGAGAGAG 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WP1; 2001 663057/76.
                                                                                                                                       Best Local Similarity:
                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W0200177380 A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
Aliqument Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAD21712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Wright A:
                                                                                                                                                                        Query Match:
                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAD21712
```

27

Aliqument Scores:

Pred. No

```
WIRE) probe MITET. It is a component of a MITET self-complexing probe composition which may be used for detection and analysis or nucleic acid sequences and for signal amplification. The composition comprises at least 2 MITET probes and an initiator probe. The WITET probes complex to the initiator probe to lorm triplex nucleic acid structures, which together form the self-complexing probe. The MITET system may be used for direct RNA analysis and DNA diagnossic analysis. It is useful for early and sensitive detection of infectious disease and cancer and for genetic hereditary testing. The system provides high sensitivity and specificity and is easy to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Multiple Triplex Peceptor Forming (MTRE) self-complexing probe composition useful for detection and analysis of nucleic acids, comprises an initiator probe and at least two MTRE probes -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present sequence is the multiple triplex receptor torming
                                                                                                                                                                                                                                                                                                                           Multiple triplex reporter forming; MTRF; self-complexing;
                                                                                                                                                                                                                                                                                                                                         nucleic acid detection, signal amplification system, genetic hereditary testing; infectious disease; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 200000
v 0 0 0 0
             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 37 BP: 0 A: 16 C: 0 G: 20 T: 1 other:
                                                                                                                                                                                                                                                                                             Multiple triplex reporter forming probe MTRF7.
                             Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure, Page 75; 142pp; English.
                                                                                     27)
                                                                                      \Box
                                                                                                                                                                                                        AAA56790 standard; DNA; 37 BP.
                                                                                     .US-09-856-070-16 (1-5) x AAD21712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99W0-US27525.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0109082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0117389
99US-0132976
            100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                 17-0CT-2000 (first entry)
                                                                                                                                             1 GAAAGGGAAAAGGAG 15
                                                                                                               1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                        initiator probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WP1; 2000-387827/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (CYGE-) CYGENE INC.
                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                MO200029624 A2.
             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 07-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ramberg ER;
                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           automate.
                                                                                                                                                                                                                                     AAA56790,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                         Query Match:
                                                                                                                                                                                          AAA56790/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                                                                                                                                             qq
```

37 GAAAGAGAGAAGGAG 23

```
The present sequence is the multiple triplex receptor forming (MTRF) probe MTRF9. It is a component of a MTRF self-complexing probe composition which may be used for detection and analysis of nucleic acid sequences and for signal amplitation. The composition comprises at least 2 MTRF probes and an initiator probe. The MTRF probes complex to the initiator probe to form triplex nucleic acid system may be used for direct RNA analysis and invaling probe. The MTRF system may be used for direct RNA analysis and invalidation probe in frections disease and cannot accept the description of the system provides high sensitivity and specificity and is easy to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Multiple Triplex Receptor Forming (MTRF) self-complexing probe composition useful for detection and analysis of nucleic acids, comprises an initiator probe and at least two MTRF probes -
                                                                                                                                                                                                                                                                                                                                                                                                                               Multiple triplex reporter forming, MTRE, self-complexing, nucleic acid detection; signal amplification system, genetic hereditary testing, infectious disease, cancer,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative:
                                                                                                                                                                                                                                                                                                                                                                            Multiple triplex reporter forming probe MTRF9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 37 BP; 0 A; 16 C; C G; 20 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 76, 142pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-856-070-16 (1-5) x AAA56792 (1-37)
US-09-856-070-16 (1-5) x AAA56790 (1-37)
                                                                                                                                                                                                              AAA56792 standard; DNA; 37 EP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US27525.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0109082.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99115-0117389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0132976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.00, 100.00
                                                                                                                                                                                                                                                                                                                       17-OCT-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25 00
                                                                                                     37 CAAAGAGAGAGGAG 23
                                                  1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 initiator probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-387827/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (CYGE-) CYGENE INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity;
Query Match;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200029624-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27 - JAN - 1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25-MAY-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ramberg ER;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                 AAA56792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              automate.
                                                                                                                                                                               AAA5679210
```

1 GluArgGluLysGlu 5

Score:

```
phosphatase II and the encoding polynuclectide with cytostatic, virocidal, immunodulatory, antiniflammatory and harmostatic activity. The polypeptide and encoded polynucleotide are applicable in diagnosis and treatment of malignan neoplasm, haemopathy. HIV infection, immunological diseases, various inflammations and developmental
                                                                                                                                                Human, receptor related protein tyrosine phosphatase 11, eytostatic, virucidai, immunodulatory, antiinflammatory, hacmostatic; malignant neoplasm; HIV; human immunodeficiency virus; infection;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        disorders. The present sequence is that of a human receptor-related protein tyrosine phosphatase 11 probe, useful to the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human receptor-related protein tyrosine phosphatase 11 and encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     polynarisedide for diagnosis and treatment of malignant neoplasm, hacmopathy, HIV infection, immunological diseases and various
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to human receptor-related protein tyrosine
                                                                                                                  Human receptor-related protein tyrosine phosphatase 11 probe 1.
                                                                                                                                                                                                  immunological disease; developmental disorder; probe; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 41 BP, 0 A, 16 C, 5 G, 20 T, 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         watches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                    (BIOW-) BIOWINDOW GENE DEV INC SHANGHAI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-U9-856-070-16 (1-5) x AAH79199 (1-41)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 6; Page 15, 36pp; Chinese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP.
               AAH79199 standard; DNA; 41 BP
                                                                                                                                                                                                                                                                                                                                   26-FRH-2001; 2001WO-CN00213.
                                                                                                                                                                                                                                                                                                                                                                  07-MAP-2000; 2000CN-0111925.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABK40858/c
ID ABK40858 standard; DNA; 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
                                                                                21-NOV-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-MAY-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         34 GANAGAGAGANGGAA 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-589931/66.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                   WO200166591-Al.
                                                                                                                                                                                                                                                                                                                                                                                                                                     Mao Y, Xie Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fercent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inflammations
                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                  13-SEP-2001.
                                                AAH79199;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ABK40858;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
AAH79199/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
```

```
The invention relates to a set of novel map-related biallelic markers, chremesty located on obesity disorder-associated or chromosomal regions on chromosomes 3. 10 and 19. The markers are useful for genotyping or estimating the frequency of an allele in a population, for detecting an association between a yenotype or inapletype and a phenotype, e.g. a disease involving drug responses, obesity or disorders related to obesity, such as hyperuricaemia, digestive pathology, hepatic function disorders, cancer, cardiovascular disease, hypertension, hyperlipidaemia, insulin disorders, atheromatous disease and cardiac insufficiency. The markers are useful for detecting a statistical cortaintion between a markers are useful for detecting a statistical cortaintion between a haplotype and a phenotype, This sequence represents a bialicie marker biality associated biallelic marker located on chromosome 3
                                                              Human; obesity asseriated biallelie marker, chromosome 3, obesity; ds; drug response; hypertension; cano hepatic function disorder, cardiovascular disease, hyperlipidaemia; insulin disorder, atheromatous disease, hyperlipidaemia; insulin disorder, atheromatous disease; cardiac insulficiency.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Set of novel map-related biallelic markers, preferably located on obesity disorder associated chromosomal regions on chromosomes 3, 10 and 19, useful, for e.g. detecting statistical correlations between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PCR: selection, primers, OPTIPRIM, breeding, cattle, parentage,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cohen D, Blumenfeld M, Chumakov I, Abderrahim H, Bihain B;
Human obesity-associated chromosome 3 biallelic marker #26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 47 BP, 8 A, 13 C, 2 G, 23 T, 1 other,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Microsatellite sequence from clone AGLA285.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      qenetic mapping; traits; amplification; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 09-856-070-16 (1-5) x ABK40858 (1-47)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 214; 311pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           marker allele and a phenotype
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAQ33591 standard; DNA; 49 HP
                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-JUN-2001; 2001W0-IB01477.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18-JUL-2000; 2000US-219704P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-FEB-1993 (tirst entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18 CAAAGAGAGAAGAG 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-155043/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (GEST ) GENSET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA033591;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Onory Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAQ33591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secore:
```

```
(T6)n >9 microsatellites in the bovine genome is estimated at >100, 000. The sequence information for ca. 230 such bovine microsatellites is summarised in the specification and indexed herein (see below).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The sequences upstream and downstream of the microsatellite sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPTIPRIM). The microsatellites may be used to identify individuals, for parentage testing, and in the yenetic mapping of economic trait loci, or genes involved the determinism of economically important
                                                                                                                                                                                                                                                                                                                                                                         The sequence is that of a bovine microsatellite sequence obtd, by screening a library of bovine Mbol DNA fragments of between 250 and 500 bp with an (ACL)5 and a (TC)15 oligonucleotide probe. One out of 50 clones cross-hybridised. Assuming independent distribution of microsatellites and Mbol sites, the Irequency of
                                                                                                                                                                                                                                                                                      Polymorphic bovine DNA markers · used in genetic identification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       were used to generate the required PCR primers for in vitro amplification of the corresp. microsatellite (using the program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Haman clone cy25309388 polymorphie site, SLO ID NO:321.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         400000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               traits esp. in cattle, to allow selective breeding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 49 BF, 33 A, U.C. 16 G, U.U. Ucher;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        detection; identification; gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; single nucleotide polymorphism; SNP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                       qene mapping, and selective breeding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-856-070-16 (1-5) x AAQ33591 (1-49)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                         Table 7, Fage 165, 517pp, English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA76638 standard; cDNA; 51 BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               replace (26,T)
/*tag= a
                                                                                                       92WO-11500340.
                                                                                                                                           91US-0642342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.00
100 00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-NOV-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              See also AAQ33501-34437.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24 GAGAGAGAGAGAG 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 GluArgGlulysGlu 5
                                                                                                                                                                                                                Georges M, Massey JM;
                                                                                                                                                                                                                                                    WPI; 1992-284684/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                             (GENM-) GENMARK.
                                                                                                                                           15-JAN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity.
                                                                                                     15-1AN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                 W09213102-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores.
Bos taurus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA76638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA76638
```

```
Sequences AAA76318 A72509 represent 1192 human nucleic acid sequences which contain single nucleotide polymorphisms (SNPS). Sequences 1 to 1192 (AAA76318-A77429) are consecutive pairs of nucleotides which contain slient SNPS. Sequences 1133 to 1192 (AAA7430-A7509) are consecutive pairs of nucleotides containing SNPS which result in changes in the corresponding amino acid sequences (ABA7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7740-A7750-A7740-A7750-A7740-A7750-A7740-A7750-A7740-A7750-A7740-A7750-A7740-A7750-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A7770-A77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human nucleic acids containing single nucleotide po ymorphisms, useful for treating a subject suffering, or at risk from a pathology due to the presence of a sequence polymorphism -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human clone eq25309388 polymorphic site, SEQ ID NO:322.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 51 BP; 20 A, 7 C, 15 G, 9 T; 0 other,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human: single nucleotide polymorphism; SNP; detection; identification; gene therapy; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ength:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-856-070-16 (1-5) x AAA76638 (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 255; 543pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAA76639 standard; cDNA; 51 BP.
                                                                                                                                                                                                                                                         26645511-0M66
                                                                                                                                                                                                                                                                                                                                                                                      98115-0109024
                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0109024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25.30
100 00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32 GAACGIGAAAAGGAA 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shimkets RA, Leach MD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-387826/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
WO200029623-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity.
                                                                                                                                                                                                                                                         17-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                      17-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                      25-MAY-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAA76639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAA76639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred.
 \begin{array}{c} \texttt{C} \times \texttt{C} \\ \texttt{C} \times \texttt{C} \\ \texttt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ò
```

```
which contain shall enriched polymorphisms (SNIS). Sequences to thich contain shall enriched the pairs of nucleotides which contain shell shall 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human nucleic acids containing single nucleotide polymorphisms, useful for treating a subject suffering, or at risk from a pathology due to the presence of a sequence polymorphism .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequences AAA76318-A77509 represent 1192 human nucleic acid sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptides can also be used in the treatment of such individuals.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PCR; selection; primers; OPTIPRIM; breeding; cattle; parentage;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w r o o o o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 51 BF, 20 A, 6 C; 15 G; 10 T; U other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Microsatellite sequence from clone AGLA300.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
iocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-856-070-16 (1-5) x AAA76639 (1-51)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 1, Page 255; 543pp; English.
                               replace (26,C)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA033612 standard; DNA; 58 BP.
                                                                                                                                                                                                                 99WO-US27293.
                                                                                                                                                                                                                                                                                              99US-0109024
                                                                                                                                                                                                                                                                       98US-0109024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  02-FEB-1993 (first entry)
                                                           /*tag- a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25 00
                                                                                                                                                                                                                                                                                                                                                                                                         Leach MD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32 GAACGTGAAAAGGAA 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                      (CURA-) CURAGEN CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-387826/33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity.
Best Local Similarity:
                                                                                                           WCD000D9CD3 AD
                                                                                                                                                                                                                                                                                                                                                                                                            Shimkets RA,
                                                                                                                                                                                                                 17-NOV-1999;
                                                                                                                                                                                                                                                                                                   6-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                           25 MAY : 2000
                            variation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAQ33612;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAQ33612
```

```
The sequence is that of a bovine microsatellite sequence and by screening a library of bovine MhoI DNA fragments of between 250 and 500 bp with an (AC15 and a (TC15 oligonucleachide probe. One out of 50 clones cross hybridised. Assuming independent distribution of microsatellites and MboI sites, the frequency of (T6)n 59 microsatellites in the bovine groome is estimated at 2100, 000. The sequence information for ~a 70 such bovine microsatellites is summarised in the specification and indexed herein (see below). The sequences upstream and downstream of the microsatellite sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amplification of the corresp. microsatellite (using the program OPTIPRIM). The microsatellites may be used to identify individuals, for parentuge testing, and in the genetic mapping of economic fauit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human spliced transcript detection oligonucleotide SEQ ID NO:17488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  or genes involved the determinism of economically Laportants esp. in cattle, to allow selective breeding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human: mouse; rat; splice transcript; detection; ENA transcript; splice variant; transcriptome; oligonucleotide library; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Polymorphic bovine DNA markers - used in genetic identification,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      were used to generate the required PCR primers for in vitro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Consorvative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     40900000 58 8P; 30 A; 0 C; 28 C; 0 U; 0 other;
qenetic mapping: traits; amplification; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               qene mapping, and selective breeding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-856-070-16 (1-5) x AAO33612 (1-58)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Table 7; Page 174; 517pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ABN44740 standard: DNA; 60 HP.
                                                                                                                                                                                                                               92WO-US00340.
                                                                                                                                                                                                                                                                                     91US-0642342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first outry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      800.001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           See also AA033501-34437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6 GAGAGAGAGAAGAG 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 GluArgGluLysGlu 5
                                                                                                                                                                                                                                                                                                                                                                                                    Georges M. Massey IM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1992-284684/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                           (GENM ) GENMARK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W0200210449-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                  15 - JAN - 1991;
                                                                                                                                                                                                                            15-JAN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Aliqument Scores:
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   traits esp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15 JUL-2002
                                                                                                            WO9213102-A
                                                                                                                                                                     06 - AUG - 1992
                                                      Hos taurus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABN44740;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ABN44740
```

× 3 3 × 2 × 2 × 4 ×

```
detection of tissue and pathology specific genes such as those occessories in specific tissue under a specific pathological condition, to detect developmental specific genes and to detect RNA transcripts and splice variants of a transcriptume of a patient suffering from a particular disorder. ABN27253 to ANN59589 represent oligonorication of the present inventories from fats, humans and mice, which are used in the exemplification of the present inventories.

N.B. The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPPO
                                                                                                                                                                                                                                                                                                                       New oligonucleotide libraries comprising oligonucleotides which selectively hybridize to ERMAS transcribed from a transcription unit of a genome, useful for detecting tissue-, pathology-, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention describes objqonucleotide libraries for detecting messenger RNAs that populate a (sub )transcriptome, where the (sub))transcriptome comprises messenger RNAs transcribed from multiple transcribtion units that populate a quinnme. The library comprises several objqonucleotides, each capable of hybridising selectively to a set of messenger RNAs transcribed from a given transcription unit of the genome, which encodes one of mote messenger RNA splice variants.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The oligonucleotide libraries are useful for detecting minns. Biological sample, in expression profiling studies, in qualitatively or quantitatively characterising the corresponding transcriptome, and in detecting RNA transcripts and splice variants of human or animal transcriptomes. The libraries may also be used as specialised minitaries to detect transcripts of a sub-transcriptome under a particular biological on pathological state, and so allowing the
                                                                                                                                                                                                                            Mintz E, Mintz L., Faigler S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                * ~ > > > 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 60 BP; 36 A; 1 C; 22 G; 1 F; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   at itp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scarch completed: January 16, 2003, 17:19:25 Job time : 82.9821 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; SEQ ID 17488; 47pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-856-070-16 (1-5) x ABN44740 (1-60)
                                                                                                                                                                                                                                                                                                                                                                                                  developmental specific genes
                                                 20-JUL-2001; 2001WO-IB01903.
                                                                                             28- HT - 2000; 20000£-221607P.
02-MAY-2001; 2001US-287724P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.00%
100.00%
100.00%
                                                                                                                                                                                                                          Shoshan A, Wasserman A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14 GAGAGAGAGAAA 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 GluArgGluLysGlu 5
                                                                                                                                                                           (COMP-) COMPUGEN INC
                                                                                                                                                                                                                                                                           WPI; 2002-257383/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hest Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
07-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
```